

1 / 34

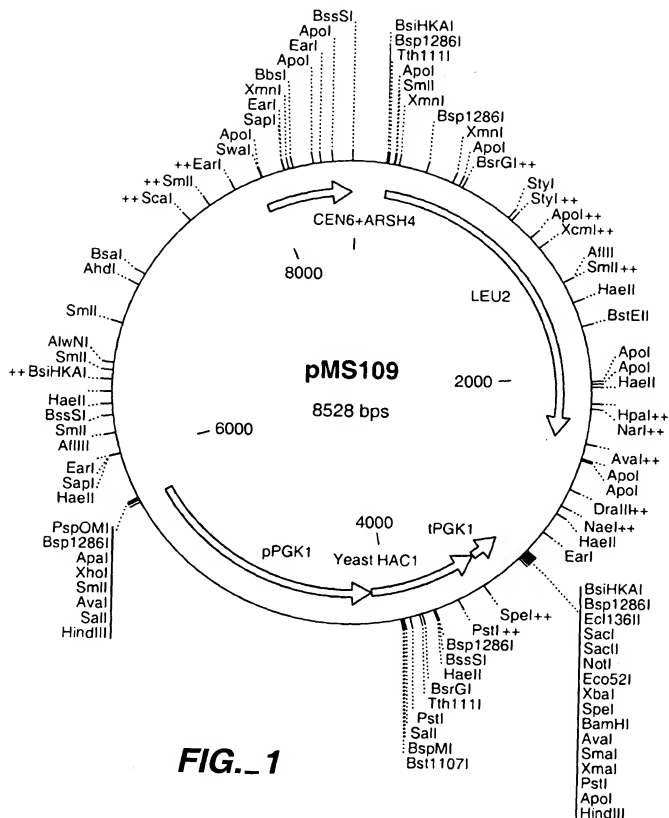


FIG. 1

2 / 34

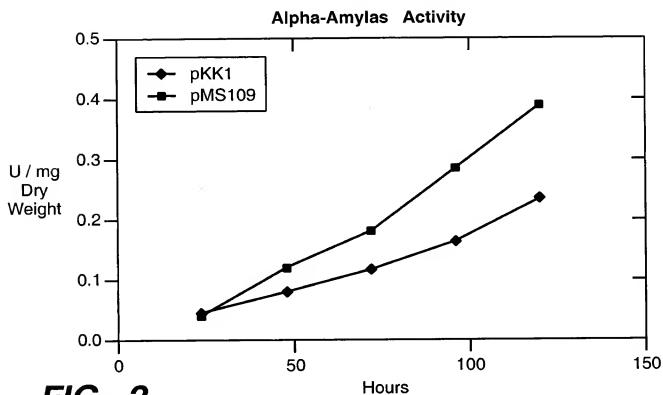


FIG._2

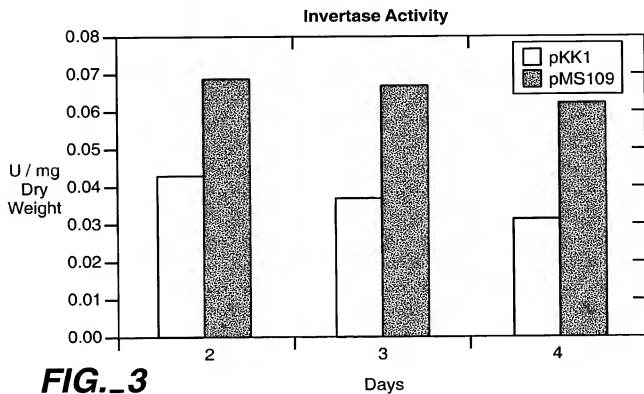


FIG._3

3 / 34

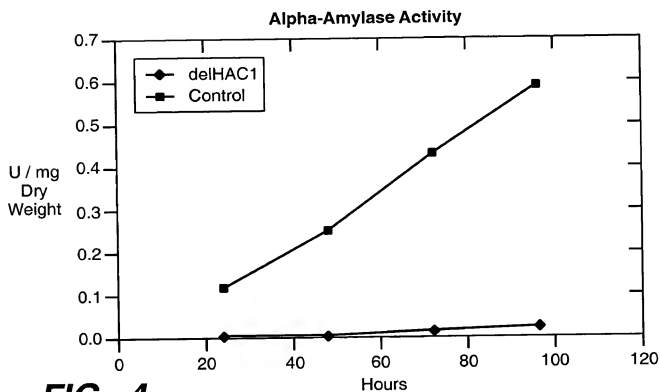


FIG._4

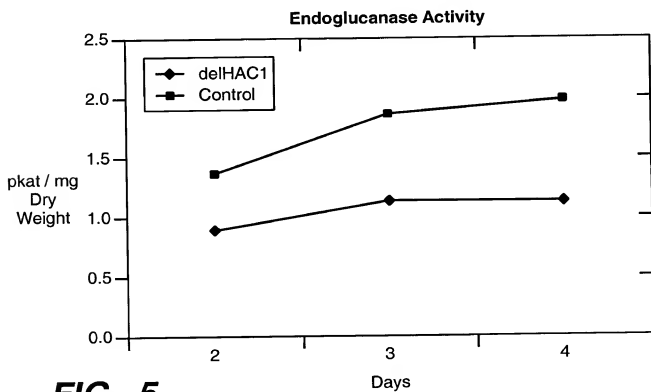
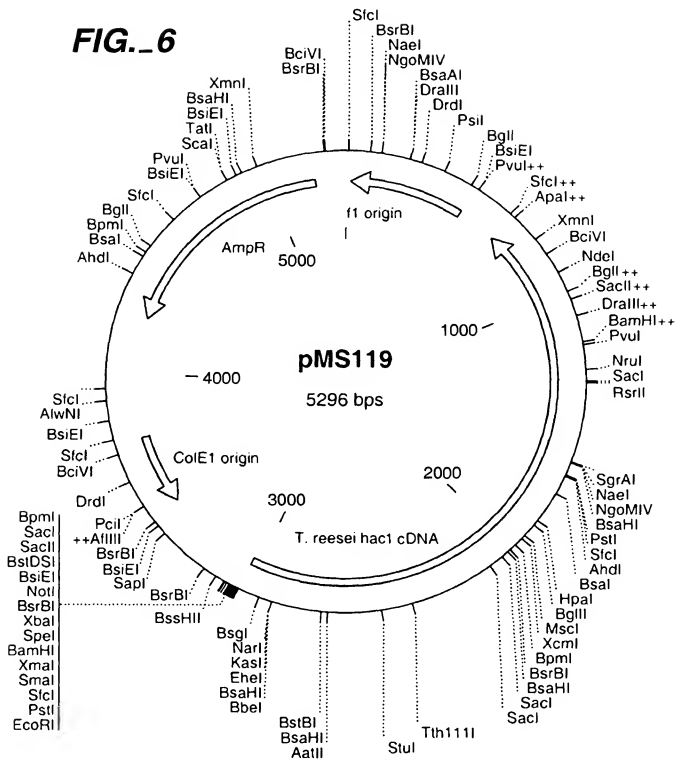


FIG._5

FIG._6



[illegible]

FIG. 7A

6/34

CTCGTCTCCCGCTCGACTCTCTCCAGGACAGCATCACTCTCTCCAGCAACTCTTTGGCTCGGGGATGGCCAAACCAATGTCCAACCC 1170
S S S P L D S L Q D S I T L S Q Q L F G S R D G Q T M S N P
CGAGCAGTCTTGATGGACCATGATGAGATCTGCGCTAACCTTACCGTTAACCCGGCTCTCTTTCCCGCTCCCTCCCGCCCATCTC 1260
E Q S L M D Q I M R S A A N P T V N P A S L S P S L P P I S
GGACAAGAGTTCCAGACCAAGGAGGACGAGGAACAGGCCGACAGAGTGAAGAGATGGAGCAGACATGGCACGAGACCAAGAAGC 1350
D K E F Q T K E E D E E Q A D E D E E M E Q T W H E T K E A
CGCCGCCCCCAAGGAGAAGACAGCAAGCATGCCCGCTCTCCAGTTCGACACAAACCTCTCTGCGAGAGATGTTGCGACCGCGCATG 1440
A A A K E K N S K Q S R V S T D S T Q R P A V
TCAATCGGTGGAGATGCGCTGTCTCTTCTCAGACAGCGCGCGCAAACTGCTTTGGCTGGACCTGTTCATCAGGATGATGGT 1530
S I G G D A A V P V F S D D A G A N C L G L D P V H Q D D G
CCTTTACGATCGGCCATTCTTTTCGGCTGTGTCAGGGCCCTTGATGCAGATCGCTATCTCTCGAAAGCAAACTTCTCGCTTCGCCCAAC 1620
P F S I G H S F G L S A A L D A D R Y L L E S Q L L A S P N
GCCTCACTGTTGACGACGATTTATCTGGCTGGTGACTCTGCGCCTGTCTTCAGAACTCTCTCCCTCCGACTACGACTTCGACATCAAC 1710
A S T V D D Y L A G D S A A C F T N P L P S D Y D F D I N
GACTTCTCAGACGACGCAAAACACGCGGCTATGACATTTGTGACGGAGCAACTATGCGCTCGGACCGCGAGCTCGACCTCGAG 1800
D F L T D D A N H A A Y D I V A A S N Y A A D R E L D L E
ATCCACGACCTTGAATCAGATCCCTTCGCGACATCTTATCCAGACGCCCAAGTCTGCGCGCTCTCTCATGGATGCGACGATGGCGGC 1890
I H D P E N Q I P S R H S I Q P Q S G A S S H G C D D G G
ATTGCGGTTGTGCTGAGGACGCGACGATCGGGCGGGATCCCGCCTCCGAGTCTTGTGCGACGCGCGGCTGCTGCGAGCTGCGAAGC 1980
I A V G V

FIG._7B

7 / 34

GTGCCTACGCAGCGTGACCTTGGCCGTCTCGAAGTCTCTCATCACCCCTGTGTGGCCGTGAAGTGGAGGAGAGGATTTCGCCTGAG 2070
GCAGCAAAAGAAGCAGGCCCGGCTCTCGACCCGAGAACGCCCTCTTGGCAGACAAGAAGAACCGACACAACAACAACAACA 2160
CCAGTATCAGATTCCCTTCGTTTTTCAAATAAGTTAGCATATGTGGTTTTTAAATGGGCAATGGGGCGGATGGCAACACGGTAGAGGCAACA 2250
AGGGTTGACTACACCTCCCAAGGGATACGGCGCAGCGAGGTTAATGACAAGGCTAAGATGGGCCCTTTTTTTTTTATGATATGAGAAC 2340
CTCTTCATCTCCCTTTACACTTCTCTAGATGGTAGTGATGATATACTGTACCATAATACAACGTCTACCTAGTGCT 2418

FIG._7C

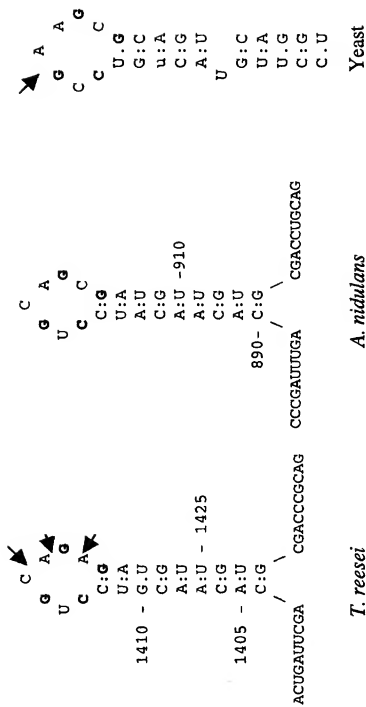
8 / 34

GGCATCCTGGTGAAGAGCCCAACACTTTCTACTGGTCGGGATAGTAGGCTCTGGCTTCGATTGCGTATGACACCGTGGCCTCTGTCTT 90
 AAGTGACTCAGGCAAGCAATCCAGCTTCCAACTCCCACTTCGCAACCTCATCAACCACTGCTTCGCTAGTTGTCAGTTATCAGACT 180
 TGAGTTGTATGAATCAGCAGACCGGTTTTTCGCCAGTGAAATAGGAGACGCTTTTCGCAAACTCTTTTGCCTACTACCCCGTCAATGAGG 270
 M K S A D R F S P V K M E D A F A N S L P T T P S L E
 TTCTGTGCTCACTGTCTCCCGGCTGACACATCTCTTCGGACGAGAATGTGTGGCTCAGACAAAGCCTGAGGAGAAGAAGCAGCGA 360
 V P V L T V S P A D T S L R T K N V V A Q T K P E E K K P A
 AGAAAGAAAGTCTTGGGGCCAGGAATTACCAGTTCCCAAGACAACTTACCTCCAAAGTGTGTGATACCTCAAGAGTCAACTCCTTact 450
 K K R K S W G Q E L P V P K T N L P P R
 cctgctaataactaccacagAAAACGGCTTAAGACAGAAGATGAGAAAGCAGCGCGGATTTAGCGGAGTTCTTCGCAACCGCGCAGCC 540
 K R A K T E D E K E Q R R I E R V L R N R A A
 GCACAAACCTCTCGGAGCGCAGAGACTTGAATGGAGAAGTTAGAAACGAGAGAAGTTGATATGGAACAACAACCAAGTTCTTCTT 630
 A Q T S R E R K R L E M E K L E S E K I D M E Q Q N Q F L L
 CAGGTCTCCCGAGATGGAGGCTGAGAACACCGTTTAAAGTCAGCAAGTTGCTCAGCTATCCGCGAGGTTTCGGGATCCCGCCACAGC 720
 Q R L A Q M E A E N N R L S Q Q V A Q L S A E V R G S R H S
 ACTCCAACTTCCAGTTCCCGGTCAAGTTTCGCCAACTCTCACCGACTCTTTTAAACAGAGAAGGATGAGGTTCTCTGGACCGC 810
 T P T S S P A S V S P T L T P T L F K Q E G D E V P L D R
 ATCCCTTTTCCAACTCCCTCGGACCGACTACTCCCAACTCTTAAGCCCTTCATCTCTGGCTGAGTCCCGGATTTGACACAACTCTT 900
 I P F P T P S V T D Y S P T L K P S S L A E S P D L T Q H P
 GCagcgatgtgtgcgacctgcAGTGTCACTGGCGGGCTCGAAGGAGATGAAGTGCCTCAGCGCTTTTCGACCTCGGAGCCAGCATTA 990
 A V S V G G L E G D E S A L T L F D L G A S I

FIG._8A

AGCATGAGCCTACACATGACCTTACAGCTCCTCTTTCTGACGATGACTTCCGCGCCTATTCAACGGTGATTCATCCCTTGAGTCAGATT 1080
 K H E P T H D L T A P L S D D D F R R L F N G D S S L E S D
 CTTCACTCCTTTGAAGACGGGTTGCGCCTTTGACGTTCTCGACTCAGGAGATTTATCAGCATTTTCCATTTTGATTCTATGGTTGATTTTGACA 1170
 S S L L E D G F A F D V L D S G D L S A F P F D S M V D F D
 CCGAGCCTGTCACCCCTCGAAGATCTGAGCAACCAACGGCCTTTTCGGATTGAGCTTCTTGCMAAGGCTGCTAGCTTGCACCCAGCCATG 1260
 T E P V T L E D L E Q T N G L S D S A S C K A A S L Q P S H
 GCGGTCCACTTTCGCGATCGGACGGGCAATTCGAGCTGGCAGTGCGTGAGAGGTTTTCGACGGAAAGACCGTCTGGTCCCGATGTT 1350
 G A S T S R C D G Q G I A A G S A
 GTAGAGGGTCGATGGAGCTGGGAATCCTTTGTAAACGCTAGCGTCGGCGATAAATCTTTTGAGAAACCGGAGCGAGCAAGAAGAACCTTG 1440
 AGGGGTCTTTGATTCGGTTAAAGCGGGGTCCGGCGTATTGATTCGGGGGAAGCGGTACAGGGTTCATACGGAGTTTCACGGAGTTCAACTAGCCCCA 1350
 AGAGAGGCCGTTGACGCTCCGGAGAAAGGGCGTTATGATAAATTTGATATATTAGCGGTGCCACTATTCAATGTAAAGCGGAGCAATTG 1615

FIG._8B



T. reesei CCACCTGATTTCGACACAAACGTCCTGCagagatgttgtcgacccgcAGTGTCAATCGGTGG 1451

A. nidulans CCCCCGATTTCGACACACACATCTTCGagcagatgttgtcgacacctgcAGTGTGATCGTCGGCG 937

FIG. 9

11 / 34

```

T. reesei  MAFAQSSPLVKFEASPAESFLSAPGDNFTSLFADSTPSTLNPMDMTPDS  50
A. nidulans  MKSADRFPVKMEDA-----FANSLPTTPSLEVPVLTVS  34
          *      * * *      * * * * *

T. reesei  VADIDSRLSVIPESQDAEDDESHSTSATAPSTSEKKPKVKRKSWGQVLPE  100
A. nidulans  PADTSLRTKNVVAQTKPE-----EKKPAKVKRWGQELPV  69
          ** *      *      * * * * *

T. reesei  PKTNLPPRKRAKTEDEKEQRRVERVLNRRAAQSSRERKRLEVEALEKRN  150
A. nidulans  PKTNLPPRKRAKTEDEKEQRRRIERVLNRRAAAQTSRERKRLEMEKLESEK  119
Yeast      *KSTLPPRKRAKTKKEEQRRIERILNRRAAHQSRKKRLHLQYLERKC  71
          *. * * * * * * * * * * * * * * *

T. reesei  KELETLLINVQKTNLILVEELNFRFRSSGVVTRSSSPDLSLQDSITLSQQ  200
A. nidulans  IDMEQQN---QFLQLRLAQMEAENNRLSQQVAQLSAEVRGSRHSTPTSSS  166
Yeast      SLLLENLNSVNLEK--LADHE      * * *. * . * *
          * .      * .

T. reesei  LFGSRDGTMSNPQSLMDQIMRSAANPTVNPASLSPLPISDKFQTK  250
A. nidulans  PASVSPTLTPTLFKQEGDEVPLDRIPFPTPSVTDYSPTLKPSLAE----  212
          * . * . .      * * . * * * *

T. reesei  EEDEEQADEDEEMEQTWHETKEAAAAKEKNSKQSRVSTDSTQRPVAVSIGG  300
A. nidulans  -----SPDLTQHPAVSVGG  226
          * * * * * * *

T. reesei  DAAVPVFSDDAGANCLGLDPVHQDDGPFSIGHSFGLSALDADRYLLESQ  350
A. nidulans  LEGDESALTL---FDLGASIKHEPTHDLTAPLSDDDFRRLFNQDSSLES  273
          ** *      *      *      *      *

T. reesei  LLASPNASTVDDYLAGDSAACFTNPLPSDYDFDINDFLTDDANHAAYDI  400
A. nidulans  SSLLLEDGFAFDV---LDSGDLSAFPFDMSVDFDTEPVLTLELQTNGLS  319
          . *      * * . * * * *

T. reesei  VAASNYYAADRELDLEIHPENQIPSRHSIQPQSGASSHGCDGGIAVGV  451
A. nidulans  DSASCKAASL-----QPSHGASTSRCDDGGQIAAGSA  350
          . ** * * .      * * * * . * * *

```

FIG. 10

12 / 34

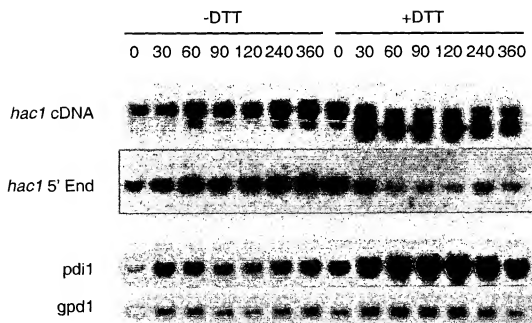


FIG._11

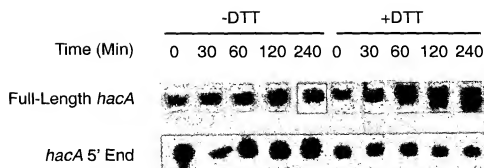


FIG._12

13 / 34

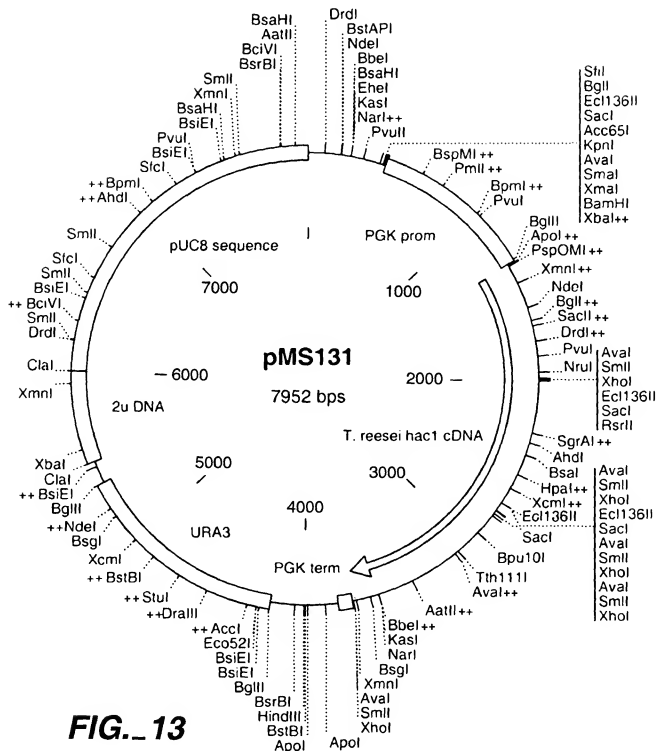


FIG. 13

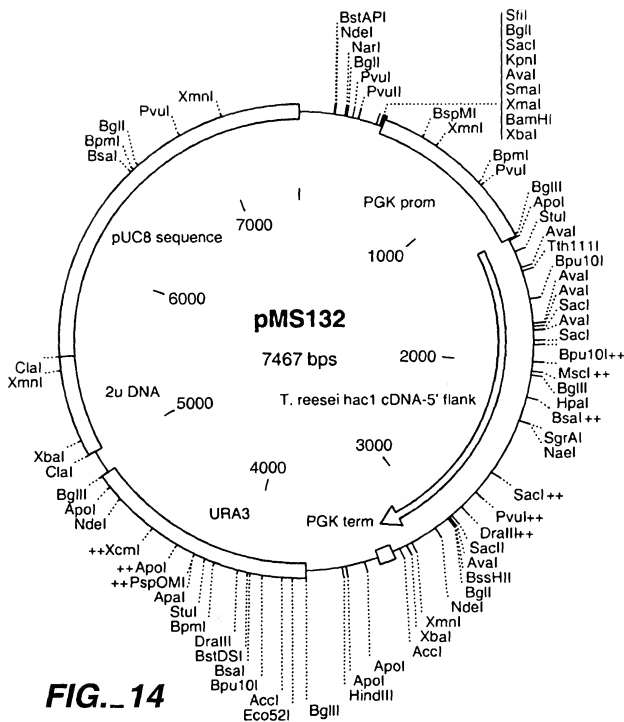


FIG. 14

FIG._ 15A

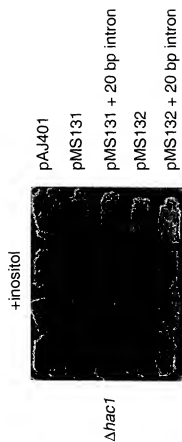


FIG._ 15B

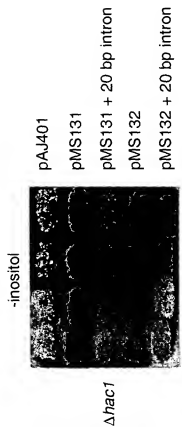


FIG._ 15C

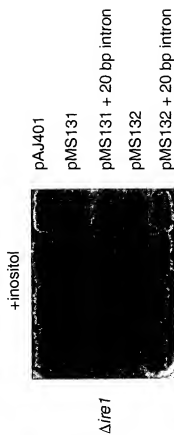
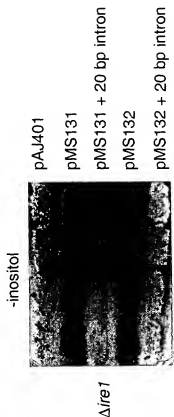


FIG._ 15D



16 / 34

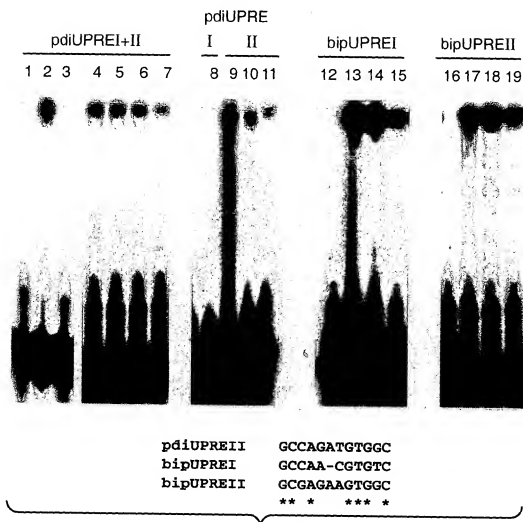


FIG. 16

17 / 34

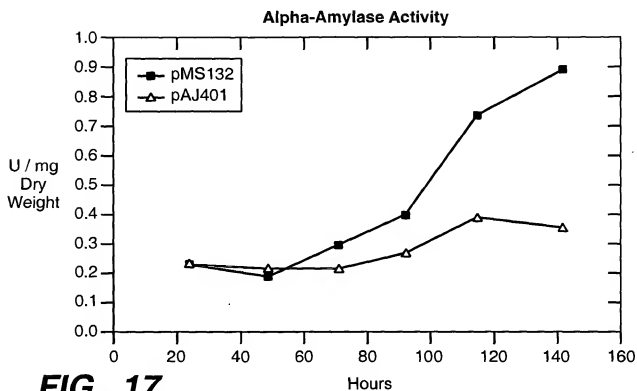


FIG._17

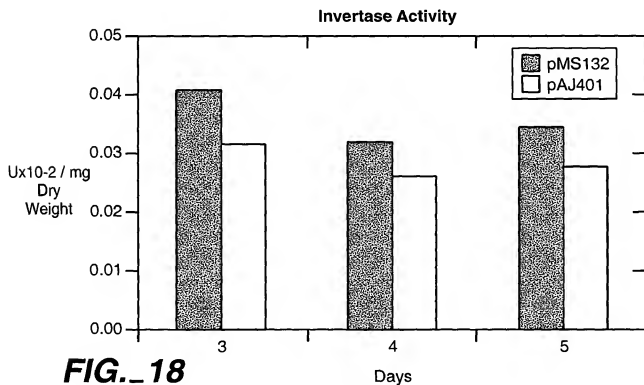


FIG._18

18 / 34

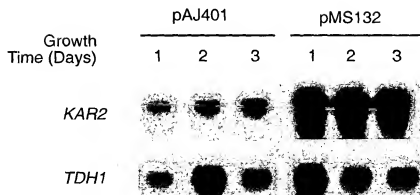


FIG. 19A

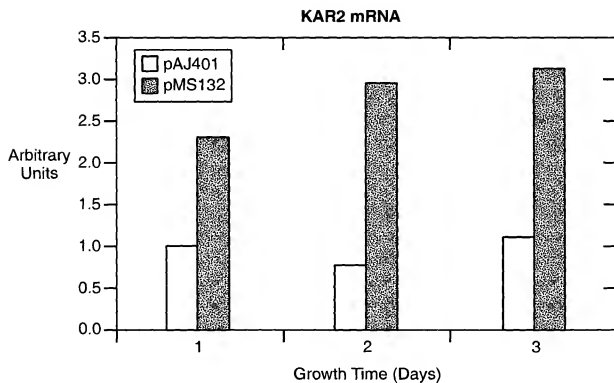
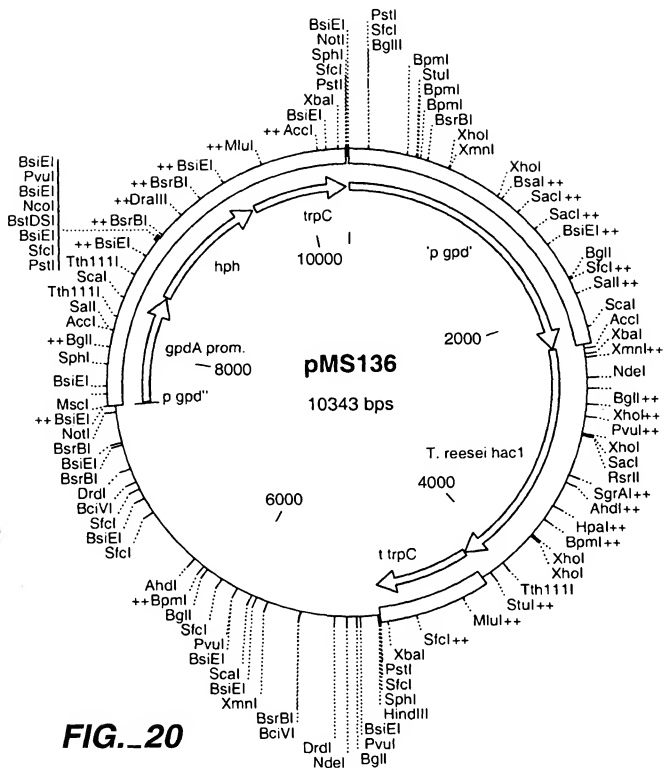


FIG. 19B



20 / 34

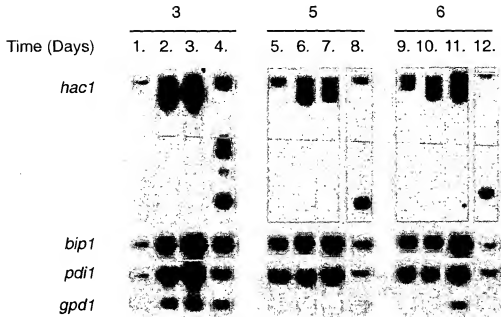


FIG._21A

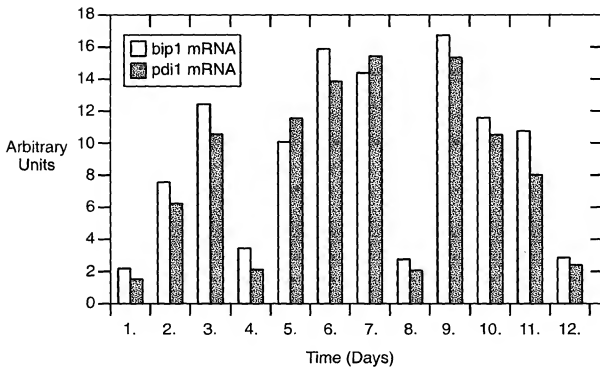


FIG._21B

21 / 34

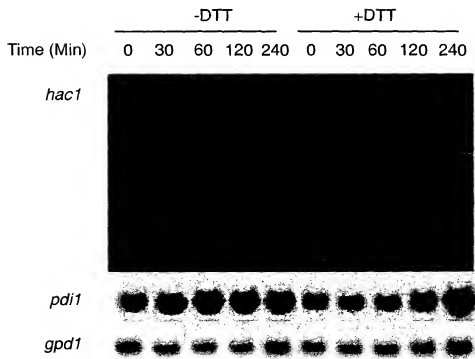


FIG._22A

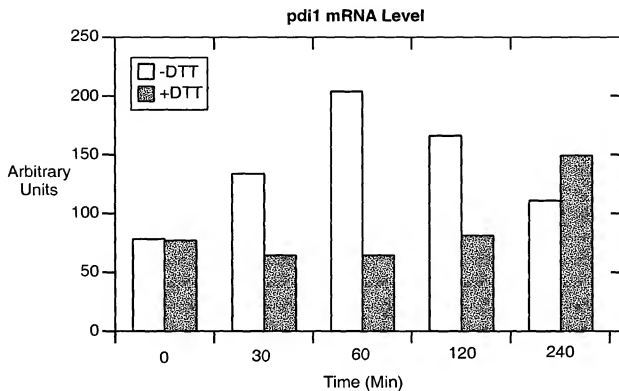


FIG._22B

22 / 34

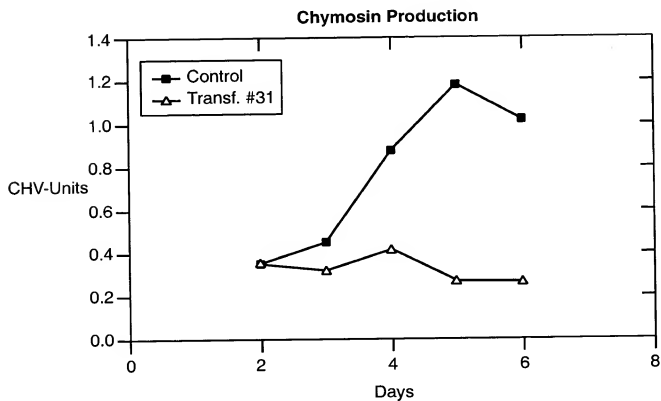


FIG._23

23 / 34

1 TTTGAACAGCAGATCGTTACTGCCTACCCAGACGTTACAGTCCACGAGCTCACGGAGGAC
F E Q Q I V T A Y P D V T V H E L T E D
61 GATGAATTCCTTAGTAATCGCTTGCATGgtgggtttccctcaactttgccgctctgttc
D E F L V I A C D G
121 cacaatctgatatactacagGAATCTGGGATTGCCAGTCTTCCCAAGCCGTGGTTCGAATT
I W D C Q S S Q A V V E F
181 CGTTCCGCCGCGGTATCGCGGCCAAGCAGGATCTCTATCGGATTGTGAAAACATGATGGA
V R R G I A A K Q D L Y R I C E N M M D
241 CAACTGCTCGCTTCCAACAGTGAGACTGGTGGAGTTGGCTGTGACAACATGACATGGT
N C L A S N S E T G G V G C D N M T M V
301 CATTTATAGGTCTCCTCAATGGAAAACTAAGGAAGAGTGGTACAACCAGATCGCGGAGCG
I I G L L N G K T K E E W Y N Q I A E R
361 GGTGTGCTAACGGCGCAGCGCCCTTGTTGCTCCGCCCGAATACGGCAAGTCTCTCGAGGAACC
V A N G D G P C A P P E Y G K S L E E P
421 CACGGCCTCCAATCCCTACTGACTGAACCGTGGGGGTGACAGCTGAATTCCGAGGACCTG
T A S N P Y *
481 GAATCCATAACCATTTTGAAGAGAACCCGGACGAGTACGAGATCGACCACGATCGCTCCC
541 GCCCATTCACGTGCGTTCTGGTAGAATAATTCTTTTGGGAGATGGCAGCACGTTAATTC
601 CAGGAAAACAGAATGACGAGGAACCTTTGACCAAACCGGGGAGGAGAAATCACCCAGACC
661 AAGTGCAACGCCAGAATACCGACACAGAAAGAAATGACCGTGAAGGGACGCTGGGCCCTC
721 AATCCGCGGCTCCCCAGACGAACAGCTCCGCTTCGGATGGCTCAGAGCCTTCTAACACAC
781 CGCAGAAACCCGCCTCTTCGTAGCTTCGTTCATGAGATTTACGCTGATTCCCTTCATTTT
841 GGTTCCTGAAACGACTCGTGATTTTCACGATCCACACCCGCCGCCCATCTCCACGCCCGG
901 TGCCGAAGCCTCACAAATCTGCCCCCATACGGTCGCTCATTTGATTTTCTGTTTCTCACGA
961 TTTGAAGGCGCATTTGGTGCTTGTGACCGCGAAGATGCGAAAGAGACGGACCATATCATCC
1021 CCTTCTATCTCTTGTTTTAAATCCCATCTTCTTACTTTTACGAGCTCATCCAGATCAAT
1081 CACCTTCGTGTTACTCCAGGATGGATATCTTTGAGAATTCGCCGAATGGGTGGAGGCATC
1141 TTCTTTCCCTGTCACTTTCTTCTATGTTTGACATGCCGCAAGCGGCGAGCCCTCACG
1201 AGAGTACGTTTGTTCATGTCTCGACATAAGATACCGCAACAACCATATTGACGAACCT
1261 TATAA

FIG._24

1 GACGAGCCTCGATCCGCCGCTCGACGCCGCTGGTTTCCCCCTTCTTTCGCCCCCT
61 TCAGCCACCTCTCTGTCCTATAACCTTTTCGACGCTACGGTCCCGCTCCAGAGGTCT
121 CGCGCTCCTGAGTACCAACGATAGAAACAAGACTGCTATCTTTGCTGCTGCCCTCTC
181 CCGCTCTCGACGCTTTTCTCCCTCGATCGCTTTCCCGGCCCTCGTGAGACGTGCGAG
241 CCATGGGCCAAACCTCTCGGAGCCCGTTGTGCGAAAAGACTTCCGAAAAGGGCGAGGATG
M G Q T L S E P V V E K T S E K G E D
301 ACAGACTCATCTACGGCGTGTCCGCCATGACGGGCTGGCGCATCAGCATGGAGGACGCTC
D R L I Y G V S A M Q G W R I S M E D A
361 ACACGGGTGAGCTGAATCTCCCCCACCCTGACAACGACACCAAGACGCGACCCGACAGGC
H T A E L N L P P P D N D T K T H P D R
421 TGTCTTTTTTCGGAGTCTTCGACGGACACGGAGGAGACAAAGTAGCGTTATTTCGAGGCG
L S F F F G V F D G H G G D K V A L F A G
481 AGAACATTCACAACATTGTTTCAAGCAGGAGAGCTTCAAATCCGGTGATTACGCTCAGG
E N I H N I V F K Q E S F K S G D Y A Q
541 GTCTCAAGGACGGCTTTCTCGCTACGGATCGGGCTATTCTCAACGACCCCAAAATACGAAG
G L K D G F L A T D R A I L N D N D P K Y E
601 AGGAAGTCTCTGGCTGCGCTGCGTACCTGATTGCGGAAACAACTATGTGCTG
E E V S G C T A C V T L I A G N K L Y V
661 CCAACGCCGCTGATTCTCGAAGCGTGTGGGCATCAAGGACGGGCCAAACCCCTATCCA
A N A G D S R S V L I K G R A K P L S
721 ACGACCACAAGCTCAGCTTGAACGGAGAAGAACCGAATCAACGCGCTGGCGGTTTCG
N D H K P Q L E T E K N R I T A A G G F
781 TCGACTTTGGCGGATCAACGGCAATCTGGCTCTGTGCGGTGCCATTGGCGACTTTGAAT
V D F R F V N G N L A L S R A I G D F E
841 TCAAGAAGAGCGCCGAGCTGTCCCCGAAAACAGATCGTTACCGCTTTTCCGATGTGCTG
F K K K A E L S P E N Q I V T A F P D V
901 AGGTGCACGAGCTTACAGAGGAGGACGAGTTCCTGGTGATTGCGCTGTGACGGTATCTGGG
E V H E L T E E D E F L V I A C D G I W
961 ATTGCCAATCTTCCAGGCTGTTGTGAGTTTGTGCGACGAGGACATCGCCGCCAAGCAGG
D C Q S S Q A V V E F V R R G I A A K Q
1021 ACCTTGACAAGATCTGCGAGAACATGATGGACAACCTGCCCTGCGTCCAACCTCAGAAACGG
D L D K I C E N M M D N C L A S N S E T
1081 GTGGCGTGGCTKCGACAACATGACCATGGTTCATCATCGGCTTCTCGACCGGCAAGTCA
G G V G C D N M T M V I I G F L H G K T
1141 AGGAGGATGGTATGACGAAATTGCCAAGAGAGTGCCCAACGGAGACGGGCCCTGTGCC
K E E W Y D E I A K R V A N G D P C A
1201 CCCCAGGAATATCCGAGTTCCCGCGTCCCGCGCTTACCACAACCTACGAAGACGAGACA
P P E Y A E F R G P G V H I N Y D E S D
1261 GCGGCTACGACGTCGACGCCGACGCGCGGCAAGTTTAGCCTTGCCGAGTCCCGGGGTC
S G Y D V D A D S G G K F S L A G S R G
1321 GCATCATCTTCTGGGCGACGGCACCGAAGTCTGACGGGCTCCGACGACGAGGATGT
R I I F L G D G T E V L T G S D D T E M
1381 TTGACAATGCTGACGAGGACAAGGACCTTGCAGGCCAGGTGCCCAAGAGCTCCGGCAAGA
F D N A E D E D K L A S Q V P K S S G K
1441 CCGATGCCAAAGGAGGAGACAGAGGCCAAGCCGACAGGCGGAGTCTGCCAAAGCCCG
T D A K E E T E A K P A P A E A S S K P
1501 CGGATGGGTGCGGAGAAGAAGACGAAAAGACACCCGAGGAGAGTAAGAAGGATTAGG
A D G S E K K Q D E K T P E E S K K D *
1561 TGGTCTCTTGAATCTTTGGGCTGCTCTCTTGAAGCCCGCGCTGGTGTGTTGATGG
1621 CGTGTTGTTGTGTGTACGTGTGGCATAATCTTTTCTTCTCCCATCACCCTACTCAAAA
1681 AACCCAGGCGTGAGGGCATTTTTAAATCGCATAGGGAGTGGGGGAGAGACGGGAGAGGC
1741 TCTGGAACGAAACATCTTGGGAGACAAGGCAGAGAGCGTAGGGCGGTTTAGACATTGAG
1801 TGTGTCTGCTTAAAAAATAAAAAAAAAA

FIG._25

25 / 34

CGGAGGCAAGAGTCATAGACGCGGGAAGAAGAAAAATGAGAGTGAGAAAGAGGAATCTGA 60
 G G K S H R R G K K K I E S E K E E S D
 TCACGCCCTTGGCACCTTGCACACCCCGCTGGGCGGATGCCGGGTAGCTCTCACCCG 120
 H A P G T L T G Q P P A G P D A G L A L T R
 CACTCATCTAATGAGGTGTTGAAGCGGACGGTGTCACTCCAGATTGGCCGTTTGAAGGT 180
 T A S N E V F E A D G V I Q I G R L K V
 CTTTACCGCTGACGTTCTGGGTTCATGGAAGCCACGGGACAGTTGTTTACCGCGGGTCTGT 240
 F T A D V L G H G S H G T V V Y R G S F
 TGACGGCGAGACGTCGCGGTCAAACGTCATGCTGGTGGAGTTCTATGATATTGCATCGCA 300
 D G R D V A V K R M L V E F Y D I A S H
 CGAAGTGGGATTGTTGCGGAAAGCGATGATCATAAACAGTTATCCGATGTTATTGCCG 360
 E V G L L Q E S D D H N N V I R C Y C R
 TGAGCAAGCCAAGGGTTTCTTCTACATCGCCCTTGAAGTGTGTCCGGCTTCTTTGCAGGA 420
 E Q A K G F F Y I A L E L C P A S L Q D
 TGTGGTAGAACGACGACGACGCGTTCGCCGAGCTAGTCAATGGTGGCTTGGATATGCCGGA 480
 V V E R P D A F P Q Q L V N G G L D M P D
 CGTCTTGGCTCAAATGTTCGCCGGGTTCGGGTACCTACACTCTCTCAAATTCGTACACCG 540
 V L R I V A G V R Y L H S L K I V H C R
 TGACTTGAAGCCTCAAATATCTCTGGTTCGCCGCTCTCTCGAGGCCGATTCGGTTCTCGGGC 600
 D L K P Q N I L V A A P R G R I G S R A
 CATCCGGCTTCTGATTTCGGACTTTGGCTTGTGCAAGAACTTGAGGATACACGAGTCTTC 660
 I R L L I S D F G L C K K L E D N Q S S
 ATTACAGGCAACCCACGCGCCATGCTGCTGGTACTCCGGGTGGAGGGCTCCCGAAGTCTCT 720
 F R A T T A H A A G T P G G G L P N C L
 GTGGATGACGACAAGACCGGTATCAGGGTTCAGAGTCTCAAATACGGAGTCTCATCTGA 780
 W M T T R A G N Q G S E S Q N T E S E
 GCCGCGGTCGTCGATCCCGAGCAATCGACGACCCACCGAGCCATTGATATCTTCTCTC 840
 P A V V D P Q T N R R A T R A I D I F S
 CCTGGGATGTGTCTTCTACTACGTCTTAACTCGAGGATGTCACTCTTTTGACAAGAATGG 900
 L G C V F Y Y V L T R G C H P F D K N G
 CAAGTTCATGCGCGAAGCAATATCGTCAAGGGGAATTTCAATCTCGATGAGTTACAGCG 960
 K F M R E A N I V K G N F N L D E L Q R
 TCTAGGAGAGTATCGGTTTGAAGCAGACGATCTTATCCGATCAATGTTGGCAGCTTGATCC 1020
 L G E Y A F E A D D L I R S M L A L D P
 ACGTCAACGgtatgtcccaacaacatcttcctttgacctgtggcgtagcgtactaatctc 1080
 R Q R
 cacagCCCCGACGCAAGCGCTGTGTTAAACCATCTCTTTCTTCTGGAATCCGTCGACCCG 1140
 P D A S A V L T H P F F F W N P S D R
 CTTAGCTTCCCTCTGTGACGTTTCGGACCACTTCGAGTTCGAACCGAGAGATCTCCATCT 1200
 L S F L C D V S D H F E F E P R D P P S
 GACGCTCTTCTGTGTCTGTAGCTCTGTAGCTCTGTATGTCATTGGCCCTGAAATGAATCTT 1260
 D A L L C L E S V A S D V I G P E M N P
 CAACTCTPCAAGGACTTCAAAGACAGTCTCGGAAGCAGCGAAATACACCGGCTCC 1320
 Q T T P A K G L Q R Q S R K Q R K Y T G S
 AAAATGCTGGACTTGATGCGAGCCCTGCGGAACAAGCGCAACCACTACAATGATATGCCG 1380
 K M L D M M R A L R N K R N H Y N D M P
 GAGCATTTGAAGACTCATATTGGTGGGCTGCCGAGGGTTACTTGAATTTCTGGACCGCT 1440
 E H L K A H I G G L P E G Y L N F W T V
 CGTTTCCCGAGTTTGTCTGATGAGTTGTCTATTGGGTGATTGTTGAAGCTGGGATTGACGAAG 1500
 R F P S L M M S C H W V I V E L G L T K
 ACGGATCGGTTCCAAGAGATATTTACGCCATTGGAGTAGGTTGTTGCGTACTGGTTTCAG 1560
 T D R F Q E I F Y A I G V G C C V L V Q
 AAATATATTG
 K Y I

FIG._26

26 / 34

1 GCACGAGCAAGATACGGCCTCTCGCACCAAGGAGACACGCATATTCGTGGTACCATCGGC
61 TGAGGGTGAAGGGGGTTCAACACAGCACAACTCAGCCACCTGGACTGGTGGAGCCGA
121 AGCCCCAGATCGAATCCACAGCCTGCACCACTTCTCTCTCGTCATATTCGCGGGGACTCA
181 CAAGCGGTTTCCGTTGCCCTTCGAATTCGACAGAGCTGCGACTGGCGAGTCATTTCCAGCAT
241 TCTAAACCTACTCCTTTGGCTGCTGCGCGGGGACTGGTCTGCCAGCCTCTCCTACTCGA
301 CCAACCGACGCTCCTTTCTGCTTCTCTCATCCCTTCTCCTTTGACGCTCCGAGCGTCAGA
361 GCGAATTTTTCCTTGGCTTCTGCTTTGGGCGGGGAATGGCTTCTCTGGCATCGCAACAGC
421 CTCTACCTCTCCGTTGGTAGAGCCATAGCCTCGAGCTCCCATGTGATCGCTCTCCGTC
481 TCTCCGCAACCCGACTTTCGTCTCGATCATGATCGCGCGACCCCGAGTCAAGGACGAT
M
541 GGTCCGCGTCGCATCAGAAGCTCTCTGGCTTTTGCTTTTATTCTCATACCATGGCTCCA
V R V A S E A L L A F A F I L I P W L Q
601 ACTTGCCGATGCTCAGCAGCAGCCTCAGCAGCCAGATTGCAATTCACCTCAAAAGAGG
L A D A Q Q Q P Q Q P Q I R I H S Q R G
661 CGAGCGCCCTTGACAAAGTCGCCGACGATGCCAACCCGTTGGTAGCAACACATGC
D A P L D K V A D D A N T R W Y A T H A
721 TGCACAGAGCTGCACCCGAGCGAAGTTCGACACCGTCAACAGGAAGCAAAAGCAGCA
A P D V H P E A K F D T V N R K Q K Q Q
781 GTCGACCGCTTCGCCCCAGCAACACAGAAATATCGACGAGCCCCCTATGACTACGCCAG
S T A S P Q Q H Q K Y R R A P Y D Y A S
841 CAAGGACAAGGCCAGAACCGATATGCGCAGCACCTTATCCGCGAATCCGAGAAACCAA
K D K A Q N R Y A Q H P I R E S E K P N
901 CTACGTAAAGTCCCCAACGATGCGAGCGCCCTCGCAACTTTAGCTCCGGCTCAGCCCGT
Y V K V P N D A S A L A T L A P A Q P V
961 CCGAGCACCACACCTCAGACATCACTGGCCCCAGCAGCGCCGCTTCTGGGCTGGC
R A P H T S R H H W P S S S A A S G L A
1021 CTCGCCGACAATGCGCGGAGTCTGGAGGACTGGGAAGTTGAAGACTTTGTTCTTCTGGC
S P H N A R S L E D W E V E D F V L L A
1081 GACCGTCGATGGAGACTCTATGCCAGCGACCGAAAGACCCGGTCGGCACCTCTGGCACCT
T V D G D L Y A S D R K T G R H L W H L
1141 CGAGGTCGACGACCCAGTGGTTGAAACCAAACTACCGAACAACAACTCCGCTTCGA
E V D Q P V V E T K H Y R T N N S V L D
1201 CGACGACTATCGCCCCGTCGACCACTACATCTGGGCGCTCGAGCCGAGCCGCGATGGAGG
D D Y R P V D H Y I W A V E P S R D G G
1261 GCTCTATGTATGGATCCCCGACTCCGGAGCGGGCCTCGTCAGGACCGGCTTCACCATGAA
L Y V W I P D S G A G L V R T G F T M A C
1321 GCACCTCGTTGAAGAACTTGCTCCATACGCGGCGACGAGCCCCCGTTGTCTATACCGG
H L V E E L A P Y A G D E P P V V Y T G
1381 AGACAAGAAGACGACATGGTCACCTGGACCGCGCTACCGGGCGGTTCTCAAAATGGTT
D K K T T M V T L D A A T G R V L K W F
1441 TGGCTCTAGCGGCTCCCAAGTCAACGAAGCCGAGAGCTGCCTTTCGGCCCAATGCCTTTGA
G S S S Q V N E A E S S L G R P N A F D
1501 CGACAGGGATACCACAGAGTGCAGCTCCATGGGCACAACTACGCTGGGAAGGACCGAGTA
D R D T T E C S S M G T I T L G R T E Y

FIG._27A

27 / 34

1561 CACGGTGGGCATCCAGAGGCGAGACGGTCGCCCTATCGCAACCTTGAAGTACGCAGAATG
T V G I Q R R D G R P I A T L K Y A E W
1621 GGGACCCAAACACCTTTGACAGCGACCTCTACAGCAATACCACGCCTCGTTGGACAACCA
G P N T F D S D L Y Q Q Y H A S L D N H
1681 TTACATACCAGTCAGCACGACGGGAGAATTTACGCGTTTGACAAGTCACAGGCAGAAAA
Y I T S Q H D G R I Y A F D K S Q A E N
1741 CGACCTGCCCTCTACACCCACAAGTTTTCGTCTCCCGTCGCCCGGGTCTTCGATGTCTG
D L P L Y T H K F S S P V A R V F D V C
1801 TCGACCGTGGGATGCGAATGCGGGAAGCAACCCGGAGCTGGTGGTTCTCCCCCAACCTCC
R P W D A N A G S N P E L V V L P Q P P
1861 AATTCCAGCGCTTGATGAGAGCACTGTCAAGATGCGAAGCAACAGCATCTTCTCAAACCA
I P A L D E S T V K M R S N S I F L N Q
1921 GACTGAAAGCGGCGACTGGTATGCGCTCTCCGGCCGTGCGTATCCGCTTATACTCGATGC
T E S G D W Y A L S G R A Y P L I L D A
1981 CCCCGTGGCCAGATCTCGCGGACGACTTGTGGGATATGGCCCATGCCCTTTGATTCCAT
P V A Q I S R D D L W D M A H A F D S I
2041 TAACCCAAATAAGCTGTCCAAGGCCCTGGTGGGAACCCACTTCTGAATCCCGTCAAGAG
N P N K L S K A L V G T H F L N P V K S
2101 CACCGGTTACCATCAGCCGCCGACGCTCCCTGCCGGCGCCCTCGACGAGTATTACGAGGA
T G Y H Q P P T L P A G A L D E Y Y E D
2161 CTTGGAGAAGCGCTCAAACAATGCTCACGCCGTGACAAACACTGTTCGGAGGAGCCAC
L E N A S N N A H A V T N T V P E E P T
2221 CATCATCACCAAAGTCAAGGCTCTTCCGAGAGTGCTGCGAACAGCGTCATTGACTTTGT
I I T K V K A L P Q S A A N S V I D F V
2281 CAGCAACCCCATCTCATATTTCTTGATAGGCTCCTTGATCTACAACGAAAAGAAGCT
S N P I L I I F L I G S L I Y N E K K L
2341 GCGACGGTCGTATCATCGGTTCGGACTCATGGCAACAATCAAGGACGCTATCCCTCTT
R R S Y H R F R T H G T I K D V Y P F F
2401 CGTTATCGAATCTGAGGCCGAGATGAATCAGGTGATGACAAGGACGGTGTGTTCCCATC
V I E S S E A G D E S G D D K D G V F P S
2461 TTCGCCGTCTCCGCGAGTCAACCCAGGACCAAAATGCGGAAGACCACTGTCCAGACA
S P S P R S Q P Q D Q N A E D H L S R H
2521 CAAGGTGGAGAGGAATGCCGGCGACCAAGGTCAAGGACAACAGGACGCTGCATGA
K V E R N A G D Q D K V K D N R S L H D

FIG._27B

28 / 34

2581 CGTTTCTGACACCTTGGAAACGAGCAACAGACTGTTGAGAAAACGGCCGATGTGGTCAA
 V S D T L E P S N K T V E K T A D V V K
 2641 GCAAGTGGATGTAGCTGGCCCTGACGCACCCCTCGACGGACTCCAATGGTGTGCACCGGA
 Q V D V A G P D A P S T D S N A G A P E
 2701 GAAGAAGAAGAAGGCTCACCGAGGCCGTGCTGGCGGTGTCAAGCACAGAAAAGGGTGGCC
 K K K K A H R G R R G G V K H R K G R P
 2761 CACCGAGGCTCGCAGTCTCATGAAAACAGCCAGCTCTCACTACAGTGGACGAGGCTGT
 T D G Q S H E N D P A L T T V D E A V
 2821 AAGCAATGGCAAGAAGCTGGGTGACCGGCAAGCTGGAACCCGACGTCATGACCATTCTA
 S N A K K L G D R P S L E P D V M T I Y
 2881 CAACGACATGCAAGCCGCTACGGGCTCTGTTATCAGCATGGGAAACATCGAGGTCGATAC
 N D M Q A V T G S V I S M G N I E V D T
 2941 GGATGTCGAGCTTGGCATGGGCAGCAACGGTACTGTCTGTTTGGCTGGCCGATTCGATGG
 D V E L G M G S N G T V V F A G R F D G
 3001 CAGGAGCTCGCCGTCAAGAGAATGACGATTCTACGACATGGCCAGCGAGAGAAC
 R D V V K R M T I Q F Y D I A T R E T
 3061 TAAGTTGCTGCGGAGAGTGACGACACCCCAATGtaaatcagccctcatcgtttaccce
 K L L R E S D D H P N
 3121 attttcccttcgctaaccgtaaccactgtctgcacGTCATTCCGGTATTACTCAAGTGC
 V I R Y Y S Q V Q
 3181 GCGAGGCGACTTCCTGTATATTGCCTTGGAAACGCTGCGCTGCTTCATTGGCAGATGTCAT
 R G D F L Y I A L E R C A A S L A D V I
 3241 TGAAAGCCGATATGCTTTGGTGAATTGGCCAAAGGCTGGACAAAAGGACCTACCGGGCGGT
 E K P Y A F G E L A K A G Q K D L P G V
 3301 CTTGTACCAAACTACCAACGGCATCAGCCACTTGCACTCTCTGCGGATTTGTTTCATCGAGA
 L Y Q I T N G I S H L H S L R I V H R D
 3361 CTTGAGCGCTCAAAACATCTTGGTCAACTTGGACAAGGACGGCAGACCAAGGCTCTTGGT
 L K P Q N I L V N L D K D G R P R L L V
 3421 GTCGGACTTTGGCTGTGTGAAGAACTGGAGGATAGACAGTCTCTGTTTCGGAGCAACGAC
 S D F G L C K K L E D R Q S S F G A T T
 3481 AGGCCAGGCGCTTGGAACTGCGGATGGCGTGCCTCCCGAACGTCCTTCGATGACGACGG
 G R A A G T S G W R A P E L L A D D C G
 3541 ACAGAATCCCGCAGCCATCGATAGCAGTACGCACAGCGCTCTCACCCATCCTCGTGGG
 Q N P P A A I D S S T H S G S H T I L V G
 3601 AGACCCCAACTCGCTTTCCAATGGAGGGCGAGCCACGAGGGCCATTGACATCTTCCCT
 D P N S L S N G G R A T R A I D I F S L
 3661 TGGCTTGTCTTCTTCTACGTGCTACCAATGGATCCCACCCGTTTGACTGTGGCGACAG
 G L V F F F Y V L T N G S H P F D C G D R
 3721 ATATATCGGGGAGGTGAACATTGAAAGGGCAACTACAATCTCGATCCATTGGACGCTCT
 Y M R E V N I R K G N Y N L D L D A L
 3781 GGGCGACTTTGGCTACGAAAGCCAAGGATCTGATTGCGTCCATGCTCCAGGCTCTCCCAA
 G D F A Y E A K D L I A S M L Q A S P K
 3841 GGCACGACCGACTCGCGAGAGGTCTGCGCCACCCCTTCTTCTGGTCTCCGAAGAAGCG
 A R P D S R E V M A H P F F W S C P K K R
 3901 TCTGCGCTTTTGTGCGAGCTGTGCGATTCTCTGGAGAAGGAGGTGCGAGATCTCCGCTC
 L A G C C D V S D S L E K E V R D P P S
 3961 GCGTGCCTTGGTCGAGCTGGAGCGCATGCGCCGGAGGTTCATTAAAGGGAGACTCTTTGAA
 P A L V E L E R H A P E V I K G D F L K
 4021 GGTGCTCACCGCGACTTTGTGCGAGTGCCTGGGCAAGCAGCGCAAGTACACCGGGAACAA
 V L T R D F V E S L G K Q R K Y T G N K
 4081 GCTGTGCACTGTTGCGCGCTCTTCGCAACAGCGGAATCACTACGAGACATGTCGGA
 L D L R A L R N K R N H Y E D M S D
 4141 CTCGCTGAAGCGCAGGTGGGATCACTGCCTGATGGGTATCTGCTTATTTGACGGCTCAA
 S L K R S V G S L P D G Y L A Y T G T V K
 4201 GTTCCCGATGCTGTTGCTGACGTGCTGGAACGTGGTGATAATCTCGAGTGGGAGAAGAC
 F P M L L L T C W N V Y N L E W E K T
 4261 GGATCGGTTTCAGGGAGTACTATGAGCCTGCCGGATTGTAGAAGAAAGAAAGGAAGAA
 D R F R E Y Y E P A G L *
 4321 AAGAAGGCCCTCTTGCTTGTGGTGTGATATCTTTTGTCTCGAAGATGGAACCGGA
 4381 AAATATTGGGGAAGTTGCATGGGAAGTGAACAAAAGGGGAAAAATGGTGAATGTGAA
 4441 GCAAGTCGTTTACGGGGTGGGCATGGTGCATCCATGTAATTGTTCTCAGCTTCTGTG
 4501 CATCAAAGCGTTGTGTTTTCGTTCTTT

FIG._27C

1 CTTTATTGTTCTATGGTTCTTAAGGACACCTGTCTTCTTGGCCCTATCCTTCTGT
 M V L K D T C P S W P Y P S C

61 GTCGTGTACACTTGACCCAGGCACCACTTGGCCAGGCCTGGCCCCCAGCTTCCCCCG
 C L V H L T P G T T W P G L A P P A S P

121 TTATGACACGGTGGCCTGTGTTCTGTGACACGGGGCAAGCAGACGTCCTCCACAAGCTGT
 V M T R W P V F L

181 GTCGACCTACATCACCGTCCTCCCTTGCAGTGGGTTAAGATAAGGCTCATAGTAAATCG
 241 ATTGATCCACAATTAAAGATCAATCACTGTCACTGCTTGAATGATGGAAGAAGCATTC
 M M E E A F

301 CTCGAGTCGACTCCCTCGCCGGCTCCCCGACGCTGAGTTGCCATTGTTGACAGTGTCCC
 S P V D S L A G S P T P E L P L L T V S

361 CGGCGGACACGTCGCTTGATGACTCGTCAGTACAGGCAGGGGAGACCAAGGCGGAAGAGA
 P A D T S L D D S S V Q A G E T K A E E

421 AGAAGCCTGTGAAGAAGAAAGTCATGGGGCCAGGAATTGCCAGTCCCCGAAGACTAACT
 K K P V K K R K S W G Q E L P V P K T N

481 TGCCCCCAAGGAAACGGGCCAAGACTGAAGATGAGAAGAGCAACGTCGTATCGAGCGG
 L P P R K R A K T E D E K E Q R R I E R

FIG._28A

541 TTCTTCGCAATCGTCGGCAGCACAAACATCACGGAGCGCAAGAGGCTCGAATGGAGA
 V L R N R A A A Q T S R E R K R L E M E

601 AGTTGGAATGAGAAGATTGAGATGGAACAGACAAAAACAGTTCTCTGCAACGACTAT
 K L E N E K I Q M E Q Q N Q F L L Q R L

661 CCCAGATGGAAGCTGAGAACAAATCGCTTAAACCAACAAAGTCGGTCAACTATCTGCTGAGG
 S Q M E A E N N R L N Q Q V A Q L S A E

721 TCCGGGGCTCCCGTGGCAACACTCCCAAGCCCGGCTCCCCCGTCTCAGTTCTCCTACCC
 V R G S R G N T P K P G S P V S A S P T

781 TAACTCTACCCCTATTAAACAAGAAGCGACGAAATCCCTCTTGAACGGATTCTCTTCC
 L T P T L F K Q E R D E I P L E R I P F

841 CCACACCCTCTATACCGACTACTCCCTACCTTGAGGCTTCCACTCTGGGTGAGTCT
 P T P S I T D Y S P T L R P S T L A E S

901 CCGAGGTGACACACATCCTGCAGgggtgtgtgagacctgacgtgTCGGTCGGTGGACT
 S D V T Q H P A V S V A G L

961 CGAAGGAGAGGAAGTGCCCTCTCTCTTTGACGTCGGCTCAAACCCCTGAACCTCACGC
 E G E G S A L S L F D V G S N P E P H A

FIG._28B

1021 TGGCGATGATCTTGCAGTCCTCTTTCTGACGATGACTTCCACCGCCTATTCAACGTTGA
 A D D L A A P L S D D D F H R L F N V D

1081 TTCACCCGTTGGTCAGATTCTTCAGTCCTTTGAAGACGGGTCGCCCTTGACGTTCTCGA
 S P V G S D S S V L E D G F A F D V L D

1141 CGGAGGAGATCTATCAGCATTTCCATTGTGATTCTATGGTTGATTTCGACCCCGAATCTGT
 G G D L S A F P F D S M V D F D P E S V

1201 TGGCTTCGAAGGCATCGAGCCGCCCCACGGTCTTCCGGATGAGACTTCTGCCAGACTTC
 G F E G I E P P H G L P D E T S R Q T S

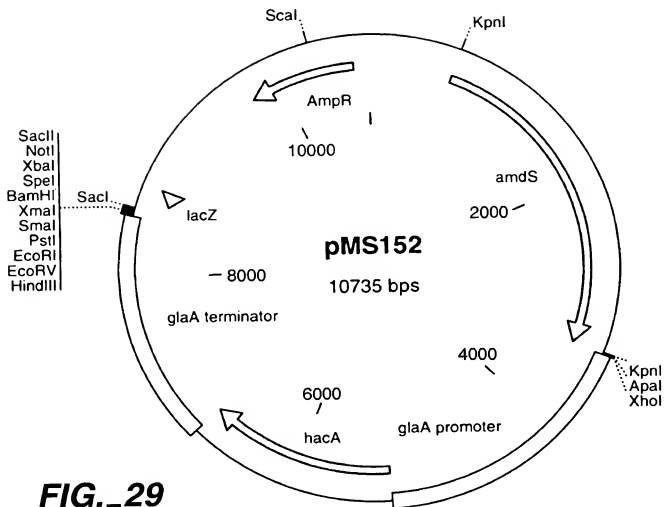
1261 TAGCGTGCAACCCAGCCTTGGCGCTCCACTTCGCGATGCGACGGGCAGGCGATTGCAGC
 S V Q P S L G A S T S R C D G Q G I A A

1321 TGGCTGTTAGCGAGCAGTTTCGCCAGGGAGATGCATCGGCTGTCTGATGGTAACGGAGTCC
 G C

1381 AATGGAGCTGGGAGTCTTTGTGACCTTGGCGTGGAACGATAGACCTACTCGAACAGCCGG
 1441 GACGACGCAACCGAATCTTGAGCGGTTTGAAATCAGCGGAAACTGACCGCGGAAGTAATA
 1501 TTGGCAAGTCTCAAAGGAGTACACGGAGTTTCATGGAGTTTCACGAAGCACCCCAAGAGCGGT
 1561 TGAGCTCTCTCTTATGGGCAAGCATAGTTGAGGTTCCGGCTGTAAATTATCATATAATCC
 1621 TTATAATTTTATCTAGATTTCATACAGCAGTTGATTGTCTGCTCATC

FIG._28C

32 / 34



33 / 34

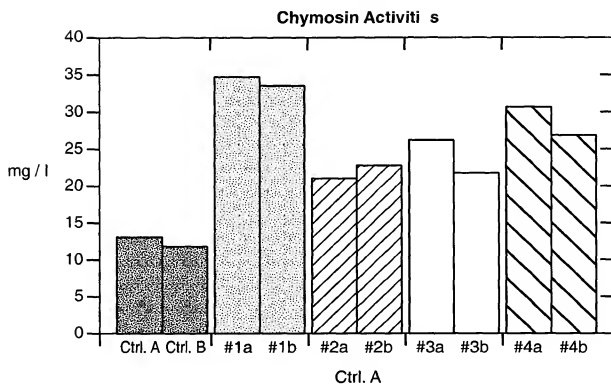


FIG._30

34 / 34

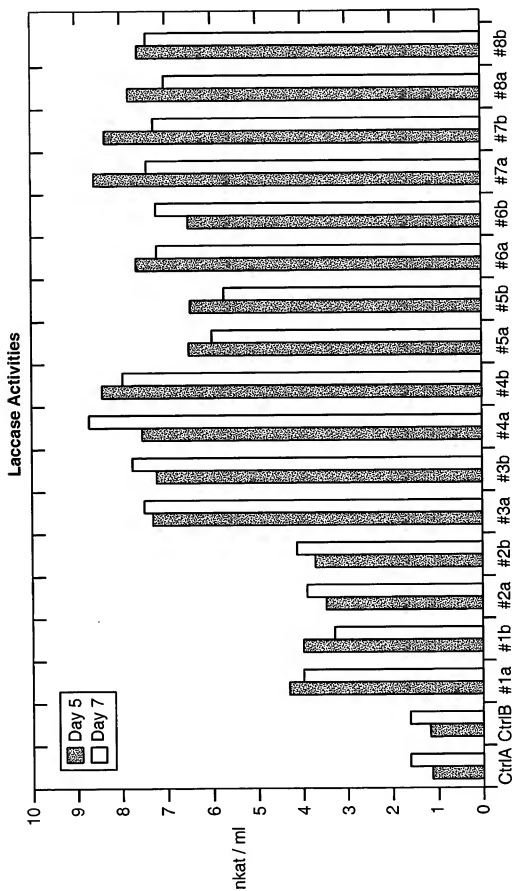


FIG._31